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10/814,873

03/31/2004

Michael P. Remington JR.

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MARSHALL & MELHORN, LLC
FOUR SEAGATE - EIGHTH FLOOR
TOLEDO, OH 43604

EXAMINER

BURKHART, ELIZABETH A

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte MICHAEL P. REMINGTON, JR.

Appeal 2009-006753
Application 10/814,873
Technology Center 1700

Decided: April 23, 2010

Before EDWARD C. KIMLIN, BRADLEY R. GARRIS, and
ADRIENE LEPIANE HANLON, *Administrative Patent Judges*.

GARRIS, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant appeals under 35 U.S.C. § 134 from the Examiner's
decision rejecting claims 1-8 and 13. We have jurisdiction under 35 U.S.C.
§ 6.

We AFFIRM.

Appellant claims a process for depositing a silica coating upon a heated glass substrate via a precursor mixture comprising a silane and a phosphorous (V) compound (claim 1) such as triethylphosphate (claim 13).

Representative claims 1 and 13, which are the sole independent claims on appeal, read as follows:

1. A process for depositing a silica coating upon a heated glass substrate comprising:

a) providing a heated glass substrate having a surface upon which the coating is to be deposited; and

b) directing a precursor mixture comprising a silane, an oxygen source, a radical scavenger, a phosphorous (V) compound and an inert carrier gas toward and along the surface to be coated, and reacting the mixture at or near the surface to form a silica coating on the surface of the glass substrate.

13. A process for depositing a silica coating upon a heated glass substrate comprising:

a) providing a heated glass substrate having a surface upon which the coating is to be deposited; and

b) premixing monosilane, oxygen, ethylene, triethylphosphate and an inert carrier gas to form a precursor mixture, directing the precursor mixture toward and along the surface to be coated, and reacting the mixture at or near the surface to form a silica coating on the surface of the glass substrate.

The references set forth below are relied upon by the Examiner as evidence of obviousness:

Neuman	5,599,387	Feb. 4, 1997
Soubeyrand	5,798,142	Aug. 25, 1998
Ye	6,106,892	Aug. 22, 2000

Under 35 U.S.C. § 103(a), the Examiner rejects claims 1-6 over Ye in view of Neuman and claims 7, 8, and 13 over Ye, Neuman, and Soubeyrand.

We will sustain these rejections based on the findings of fact, conclusions of law, and rebuttals to argument well expressed by the Examiner in the Answer. We add the following comments for emphasis.

As an initial matter, we clarify that Appellant's arguments are directed to independent claims 1 and 13 only.

In rejecting these claims, the Examiner finds that Ye's process for depositing a silica coating generally corresponds to Appellant's independent claim process except that Ye uses a trivalent phosphorous compound (e.g., triethylphosphite) to accelerate silica deposition whereas the independent claims use a pentavalent phosphorous (i.e., phosphorous (V)) compound (Ans. 3-4). Concerning this deficiency, the Examiner finds that Neuman discloses using various compounds including trivalent phosphorous compounds and pentavalent phosphorous compounds for accelerating deposition of silicon oxide (i.e., silica) alone or in combination with another oxide such as tin oxide (*id.*). Based on these findings, the Examiner concludes that it would have been obvious for an artisan "to have modified the process taught by Ye by using the phosphorous (V) compounds disclosed in Neuman as the accelerant instead of triethylphosphite, as Neuman teaches that all such accelerants are so capable" (*id.* at 4).

Appellant argues that Neuman's use of phosphorous compounds as an accelerant "is shown only in conjunction of the deposition of silicon + another metal, and not for the production of silica alone" (Br. 11). Appellant acknowledges the Examiner's finding that Neuman teaches using accelerants

for silicon oxide alone or in conjunction with, for example, tin oxide (*id.* at ¶¶ bridging 11-12). Nevertheless, Appellant argues that "Neuman does not actually teach the use of this accelerant with silicon oxide alone but is instead consistent in showing layers of silicon oxide in conjunction with another metal" (*id.*).

As correctly explained by the Examiner (Ans. ¶¶ bridging 7-8), Neuman expressly and repeatedly teaches using accelerants (e.g., trivalent phosphorous compounds and pentavalent phosphorous compounds) for silicon oxide alone or in combination with another oxide such as tin oxide (*see* Neuman Abstract, col. 13, ll. 15-65). Appellant has provided no factual evidence or legal authority to support the proposition that an artisan would have ignored these express teachings of Neuman and concomitantly the suggestion derived from these teachings to use Neuman's pentavalent phosphorous compounds as an accelerant for depositing the silica of Ye.

For the reasons set forth above and in the Answer, we sustain the Examiner's § 103 rejections of claims 1-6 over Ye in view of Neuman and of claims 7, 8, and 13 over Ye, Neuman, and Soubeyrand.

The decision of the Examiner is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

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